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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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12/18/2001

Hamid Reza Rategh

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11/19/2003

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EXAMINER

NGUYEN, LINH V

ART UNIT

PAPER NUMBER

2819

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/024,943

Applicant(s)

RATEGH ET AL.

Examiner

Linh V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/18/01 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 6 –12, and 14 - 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Gilbert U.S. patent No. US 66172549.

Regarding to claim 1, Fig. 3 Gilbert disclose a method for improving an input match in a circuit comprising: operating a cascode (Q4-Q3) having an input signal port (Vin) with an input signal impedance (lin) and further having a stage gain controlled by a level setting gain control voltage (Vbias); and operating an impedance compensating circuit (Q1, Q2) for changing a compensating impedance presented at the input signal port (Col. 7 lines 10 –13), wherein the impedance compensating circuit is controlled by the level setting gain control voltage (Vbias) and wherein the impedance compensating circuit is operable to counteract changes in the input signal impedance correlated with changes in the stage gain (Fig. 3 (16), also see Fig. 11 Col. 10 lines 59 – 65).

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Regarding to claim 2, the method of claim 1 wherein: the impedance compensating circuit is connected in parallel with the input signal port (Fig. 3).

Regarding to claim 6 the method of claim 1 wherein: the cascode is implemented using metal-oxide semiconductor transistors formed as an integrated circuit (Col. 2 line 59).

Regarding to claim 7. The method of claim 1 wherein: the cascade is implemented using devices selected from a list consisting of metal-oxide semiconductor transistors, silicon bipolar transistors and germanium transistors (Col. 2 line 58 – 59).

Regarding to claims 8, and 16, Fig. 3 of Gilbert disclose a circuit for processing a signal comprising: a cascode having a first transistor (Q3) connected in a configuration selected from a group consisting of a common gate configuration and a common base configuration and a second transistor (Q4) connected in a configuration selected from a group consisting of a common source configuration, a common drain configuration, a common emitter configuration and a common collector configuration (Col. 4 lines 1 – 10); a gain controller (Vbias) operable to adjust a gain of the cascade in response to a control signal (22); and an impedance controller (Q1, Q2) operable to adjust an input impedance (V_{in} , I_{in}) of the cascode with a loading impedance (Fig. 3, Col. 7 lines 10 - 12) in response to the control signal (Vbias); whereby the circuit operates with input impedance compensation. (Col. 7 lines 18 – 24).

Regarding to claim 9, the circuit of claim 8 wherein the circuit is an amplifier (Fig. 3).

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Regarding to claims 10, and 17, the circuit of claim 8 wherein the circuit is an amplifier that operates at a narrow band of frequencies in the microwave region (Col. 1 line 25).

Regarding to claims 11 and 18, the circuit of claim 8 wherein the circuit is implemented as a single integrated circuit (Fig. 3).

Regarding to claims 12 and 19, the circuit of claim 8 wherein the circuit is implemented using metal-oxide semiconductor technologies (Col. 4 lines 1 – 10).

Regarding to claim 14, the circuit of claim 8 wherein the impedance controller comprises an inverter (Fig. 3).

Regarding to claim 15. The circuit of claim 8 wherein the gain controller outputs a DC bias voltage that is applied to a control terminal of the first transistor (Fig. 3).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al.

Fig. 3 of Gilbert as applied to claim 1 discloses every aspect of applicant's claimed invention except for the compensation circuit is connected in series or series-parallel with the input signal port.

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At the time the invention was made, it would have been to a person of ordinary skill in the art to have the compensation circuit (Fig. 3) of Gilbert connecting series, or series parallel to the input port since in the specification and figures of applicant have not disclose the series, or series-parallel connection and provides any advantage, which is used for a particular purpose, or solves a stated problems. One of ordinary skill in the art would have expected applicant's invention to perform equally well with Fig. 11 of Fujioka et al. because it has indicated equivalent by applicant's invention, 2, 3 and 4.

5. Claims 5, 13, and 20, rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert as applied to claims 1, 8 and 16 above, and in view of Applicant's Admitted Prior Art (AAPA).

Fig. 3 of Gilbert as applied to claims 1, 8, and 16 above, disclose every aspect of applicant's claimed invention, except for not explicitly disclose the circuit is implemented using Gallium Arsenide technologies, however Gallium Arsenide technologies is a well know art in amplifier circuit as have indicated by AAPA (page 2, lines 5 – 7). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made have the amplifier circuit of Gilbert implemented using Gallium Arsenide as have indicated by AAPA.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh Van Nguyen whose telephone number is (703) 305-1934. The examiner can normally be reached from 8:30 – 5:00 Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Tokar can be reached at (703) 305-3493. The fax phone numbers for the organization where this application or proceeding is assigned are (703-872-9306) for regular communications and (703-872-9306) for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

LVN

November 11, 2003.



Michael Tokar
Supervisory Patent Examiner
Technology Center 2600